ANALYTICA CHIMICA ACTA

International journal devoted to all branches of analytical chemistry

(Abstracted, indexed in: Anal. Abstr.; Biol. Abstr.; Chem. Abstr.; Curr. Contents Phys. Chem. Earth Sci.; Life Sci.; Index Med.; Mass Spectrom. Bull.; Sci. Citation Index; Excerpta Med.)

VOL. 214 CONTENTS NOVEMBER 15, 1988

Special issue on Flow Analysis, Proceedings of the 4th International Conference held at Las Vegas, NV, U.S.A., April 17–20, 1988

Foreword by G.E. Pacey (Oxford, OH, U.S.A.) xi

Homogeneous and heterogeneous systems. Flow injection analysis today and tomorrow
J. Ruzicka (Seattle, WA, U.S.A.) and E.H. Hansen (Lyngby, Denmark) 1
The theoretical and practical development of flow injection extraction
B. Karlberg (Sollentuna, Sweden) 29
On-line separation and preconcentration in flow injection analysis
Z. Fang, Z. Zhu, S. Zhang, S. Xu, L. Guo and L. Sun (Shenyang, China) 41
Atomic spectrometry and flow injection analysis: a synergic combination
J.F. Tyson (Loughborough, Gt. Britain) 57
Impulse/response functions of individual components of flow-injection manifolds
I.C. van Nugteren-Osinga, M. Bos and W.E. van der Linden (Enschede, The Netherlands) 77
Seeking high-sensitivity flow injection analysis
T. Korenaga and K.K. Stewart (Blacksburg, VA, U.S.A.) 87
Study of sample dispersion in flow injection analysis
T. Korenaga, F.-H. Shen, H. Yoshida, T. Takahashi (Okayama, Japan) and K.K. Stewart (Blacksburg, VA, U.S.A.) 97
Applications of in situ detection with an automated micro batch analyzer
J.A. Sweileh and P.K. Dasgupta (Lubbock, TX, U.S.A.) 107
Different approaches to the determination of ammonium ions at low levels by flow injection analysis
G. Schulze, C.Y. Liu, M. Brodowski, O. Elsholz, W. Frenzel (Berlin, F.R.G.) and J. Möller (Höganäs, Sweden) 121
In-line flow injection analysis for monitoring lactic acid fermentations
K. Nikolajsen, J. Nielsen and J. Villadsen (Lyngby, Denmark) 137
Determination of creatinine in undiluted blood serum by enzymatic flow injection analysis with optosensing
M. T. Jeppesen and E.H. Hansen (Lyngby, Denmark) 147
Enzymatic methods for the determination of ethanol based on linear and cyclic flow-injection systems
A.M. Almuaibed and A. Townshend (Hull, Gt. Britain) 161
Immobilized enzymes in clinical and biochemical analysis. Applications to the simultaneous determination of acetylcholine and choline and to determination of lipids
M. Masoom (Quetta, Pakistan) 173
p-Aminophenyl phosphate: an improved substrate for electrochemical enzyme immunoassay
H.T. Tang, C.E. Lunte, H.B. Halsall and W.R. Heineman (Cincinnati, OH, U.S.A.) 187
Novel use of doublet peaks in flow injection analysis. Simultaneous spectrophotometric determination of nickel(II) and iron(II)
D.A. Whitman, G.D. Christian and J. Ruzicka (Seattle, WA, U.S.A.) 197

(Continued overleaf)

(Contents continued)

Spectrophotometric determination of aromatic primary amines and nitrite by flow injection analysis
K.K. Verma and K.K. Stewart (Blacksburg, VA, U.S.A.) 207
Integrated reaction/spectrophotometric detection in unsegmented flow systems
F. Lázaro, M.D. Luque de Castro and M. Valcárcel (Córdoba, Spain) 217
Rapid spectrophotometric determination of total phosphorus in industrial wastewaters by flow injection analysis including a capillary digestor
M. Aoyagi, Y. Yasumasa and A. Nishida (Osaka, Japan) 229
Catalytic determination of molybdenum in plants by flow-injection spectrophotometry with ion-exchange separation
L.C.R. Pessenda, A.O. Jacintho and E.A.G. Zagatto (São Paulo, Brazil) 239
Spectrophotometric flow-injection determination of sucrose and total reducing sugar in sugar-cane juice and molasses
I.L. Mattos, E.A.G. Zagatto and A.O. Jacintho (São Paulo, Brazil) 247
Simultaneous determination of cyanide and thiocyanate by the pyridine/barbituric acid method after diffusion through a microporous membrane
A. Tanaka, K. Mashiba and T. Deguchi (Kumamoto, Japan) 259
Flow-injection spectrophotometric determination of palladium in catalysts and dental alloys with 2-(5-bromo-2-pyridylazo)-5-(*N*-propyl-*N*-sulfopropylamino) aniline
T. Sakai and N. Ohno (Gifu, Japan) 271
Spectrophotometric determination of trace uranium in geological samples by flow injection analysis with on-line levextrel resin separation and preconcentration
X. Wu and W. Qi (Beijing, China) 279
Flow-injection determination of sodium and potassium by separation on a silica column and extraction-spectrophotometry with benzo-18-crown-6 and tetrabromophenolphthalein ethyl ester
S. Motomizu and M. Onoda (Okayamashi, Japan) 289
Flow-injection determination of membrane-selected organic compounds
R.G. Melcher (Midland, MI, U.S.A.) 299
Determination of octanol/water partition coefficients by flow injection analysis
S.J. Gluck (Midland, MI, U.S.A.) 315
Lead preconcentration with flow injection for flame atomic absorption spectrometry
S.R. Bysouth, J.F. Tyson (Loughborough, Gt. Britain) and P.B. Stockwell (Orpington, Gt. Britain) 329
Flow-injection techniques for the removal of stable-compound interferences in flame atomic absorption spectrometry of calcium
C.E. Adeeyinwo and J.F. Tyson (Loughborough, Gt. Britain) 339
Potentiometric flow-injection determination of trace chlorine based on its redox reaction with an iron(III)/iron(II) buffer
N. Ishibashi, T. Imato, H. Ohura and S. Yamasaki (Fukuoka, Japan) 349
A multi-ion sensor cell and data-acquisition system for flow injection analysis
T.J. Cardwell, R.W. Cattrall, P.C. Hauser (Melbourne, Vic., Australia) and I.C. Hamilton (Newcastle, N.S.W., Australia) 359
Applications of flow injection analysis in a power plant determination of pH, ammonia and hydrazine in an AVT-conditioned water steam cycle
M.L. Balconi, F. Sigon, R. Ferraroli and F. Realini (Milan, Italy) 367
Simultaneous determination of phenolic compounds in water by normal and derivative flow injection/cyclic voltammetry
F. Cañete, A. Ríos, M.D. Luque de Castro and M. Valcárcel (Córdoba, Spain) 375

Short Communications
Flow-injection systems for sample introduction in mass spectrometry
J.S. Canham and G.E. Pacey (Oxford, OH, U.S.A.) 385
Initial studies of large-bore flow-injection systems
K.A. McGowan and G.E. Pacey (Oxford, OH, U.S.A.) 391

On-line electrolytic dissolution of alloys in flow injection analysis. Part 2. Spectrophotometric determination of molybdenum in steels
H. Bergamin F°, F.J. Krug, B.F. Reis, J.A. Nobrega, M. Mesquita and I.G. Souza (São Paulo, Brazil) 397
An automated spectrophotometric field monitor for water quality parameters. Determination of ammonia
J.R. Clinch, P.J. Worsfold (Hull, Gt. Britain) and F.W. Sweeting (Bristol, Gt. Britain) 401
Flow-injection determination of inorganic pyrophosphate with use of an enzyme thermistor containing immobilized inorganic pyrophosphatase
I. Satoh and T. Ishii (Kanagawa-ken, Japan) 409
Flow-injection determination of glutathione with amperometric monitoring of the enzymatic reaction
I. Satoh, S. Arakawa and A. Okamoto (Kanagawa-ken, Japan) 415
Determination of zinc and cadmium in small amounts of biological tissues by microwave-assisted digestion and flow injection atomic absorption spectrometry
M. Burguera, J.L. Burguera and O.M. Alarcón (Mérida, Venezuela) 421
Determination of sulphur dioxide in young white wines by flow injection with chemiluminescence detection
J.L. Burguera and M. Burguera (Mérida, Venezuela) 429
Flow-injection spectrophotometric determination of fluoride by using the zirconium/alizarin red S complex
T.J. Cardwell, R.W. Cattrall, M. Mitri (Melbourne, Vic., Australia) and I.C. Hamilton (Newcastle, N.S.W., Australia) 433
Preconcentration and determination of calcium and magnesium in brine with flow-injection systems
H. Wada, K. Asakura, G. Venkata Rattaiah and G. Nakagawa (Nagoya, Japan) 439
Factors affecting the detection limit of a flow-injection spectrophotometric procedure
J.F. Tyson and A.B. Marsden (Loughborough, Gt. Britain) 447
Flow-injection spectrophotometric determination of glucose in blood plasma with Bindschedler's green leuco base as color reagent
M. Akiba and S. Motomizu (Okayama, Japan) 455

Author Index 463